

MECHANISM FOR RESOURCE ALLOCATION IN A DIGITAL SIGNAL PROCESSOR
AND METHOD OF OPERATION THEREOF

ABSTRACT OF THE DISCLOSURE

A mechanism for resource allocation in a processor, a method of allocating resources in a processor and a digital signal processor incorporating the mechanism or the method. In one embodiment, the mechanism includes: (1) categorization logic, associated with an earlier pipeline stage, that generates instruction type information for instructions to be executed in the processor and (2) priority logic, associated with a later pipeline stage, that allocates functional units of the processor to execution of the instructions based on the instruction type information.